PATIENT COUNSELLING BY PHARMACISTS UPON HOSPITAL DISCHARGE

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Introduction

It is a known fact that a patient's compliance with instructions about his medication can be very poor (Kitching et al., 1990; Regner et al., 1987). A third of the studies done report a noncompliance rate of 50% or more (Raynor and Barber, 1989; Robinson and McKenzie, 1984). Furthermore, more than half of the patients stop the treatment when they feel better (McMahon et al., 1987; Bailie and Bennett, 1987). Noncompliance greatly decreases the therapeutic benefit of the drug, produces inestimable costs, and provides considerable frustration for the physician. It is expected that giving patients more complete instructions concerning the use of their medication would reduce the extent of noncompliance and decrease misuse of medication (Puckett et al., 1978).

Aim

The aim of this project was to recommend counselling of patients by pharmacists upon discharge from St. Luke's Hospital.

Methods

A population of 247 patients was considered from two medical wards (one male and one female) and patients randomly allocated to test/control groups:

Gp A: (Test) Pharmacist-counselled patients

Gp A_1:	Verbal advice from the pharmacist only
Gp A_2:	Verbal advice from pharmacists reinforced by written instructions
Gp A_3:	Verbal advice from pharmacists following counselling by medical/nursing staff
Gp A_4:	Verbal advice from pharmacist reinforced by written instructions following counselling by medical/nursing staff

Gp B: (Control) Non-Pharmacist counselled patients

Gp B_1:	Pharmacy technician advice only
Gp B_2:	Medical/nursing, followed by Pharm. Tech. advice

Certain patients did not qualify to be counselled themselves and their relatives were advised instead.

A pre-test and a post-test 15 days later were used to quantify a patient's knowledge about his/her medication. For Group A patients the pre-test was performed just prior to the pharmacist's counselling by the patient's bedside. For Group B patients, the pre-test was performed after they had collected their discharge medication from the In-Patients' pharmacy, doing the test within the pharmacy premises themselves. The post-test was then performed at the patient's residence 15 days later, with a latitude of 3 days.

The pre-test and post-test consisted of 14 questions, directed at the dosing schedule and essential ancillary information:

1. What is the name of the drug?
2. How much should you take?
3. How should they be taken?
4. What are they for?
5. What would you do if you miss a dose?
6. How important is it that you take them?
7. What will happen if you stop?
8. Do you know the side-effects of this drug?
9. Which foods/beverages/non-prescription drugs could enhance the side-effects of your drug?
10. Can you take other medicines?
11. For how long will you need to take them?
12. If the Physician tells you to stop treatment, what should you do with remaining doses?
13. How do you store your medication at home?
14. How do you obtain a re-fill for your medication?

Answers to these questions constitute all the information which a patient should know about the medication (Regner et al., 1987; Walker and Kay, 1986; American Society of Hospital Pharmacists, 1984). The patient's response to the pre-test and post-test was quantified as a percentage score.

Labelling:

Labels were written manually giving information in a standard sequence. Most important directions were given first. A time-scale and visual

displays, eg coloured dots, were used to explain the dosing schedule. Tablets/capsules were provided in small plastic containers.

Verbal instructions:

Attention had to be given both to the informational needs of the patient as well as the technique of delivering this advice (Quintrell, 1982). In general, patients require enough information to permit them to answer the questions presented in the pre-/post-test (Walker and Kay, 1986). Communication skills had to be mastered and practised throughout interactions with patients.

Written instructions:

Written information was used to supplement oral communication since the information given on a label is restricted because of lack of space. A standard form was used to deliver this written information.

Results/Discussion

76% of patients considered in the pre-test contributed also to the post-test. This compares favourably with the 63% value obtained by Paulson et al. (1976) in a similar study. The effectiveness of pharmacist counselling was immediately evident with Groups A_2 and A_4 at a particularly conspicious peak in Figure 1, due to supplementary written information given.

On the contrary, the post-test scores of the control groups are actually lower than the pre-test scores (Figure ?) Pre-test scores of test and control groups were practically all in the same region. However, while post-test scores of the control groups dipped below the corresponding pre-test scores, post-test scores after pharmacist counselling ranged much higher than the corresponding pre-test scores.

Fig.1: Mean ± limit of error (at P<5) for the test groups at pre- and post-test levels.

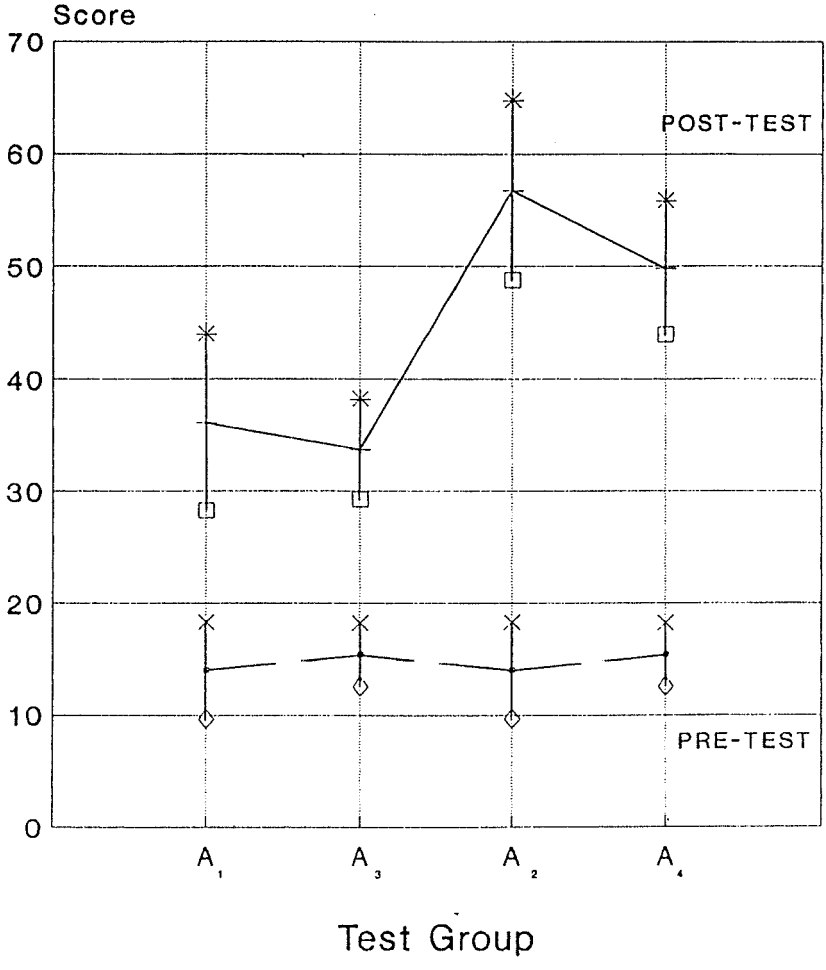
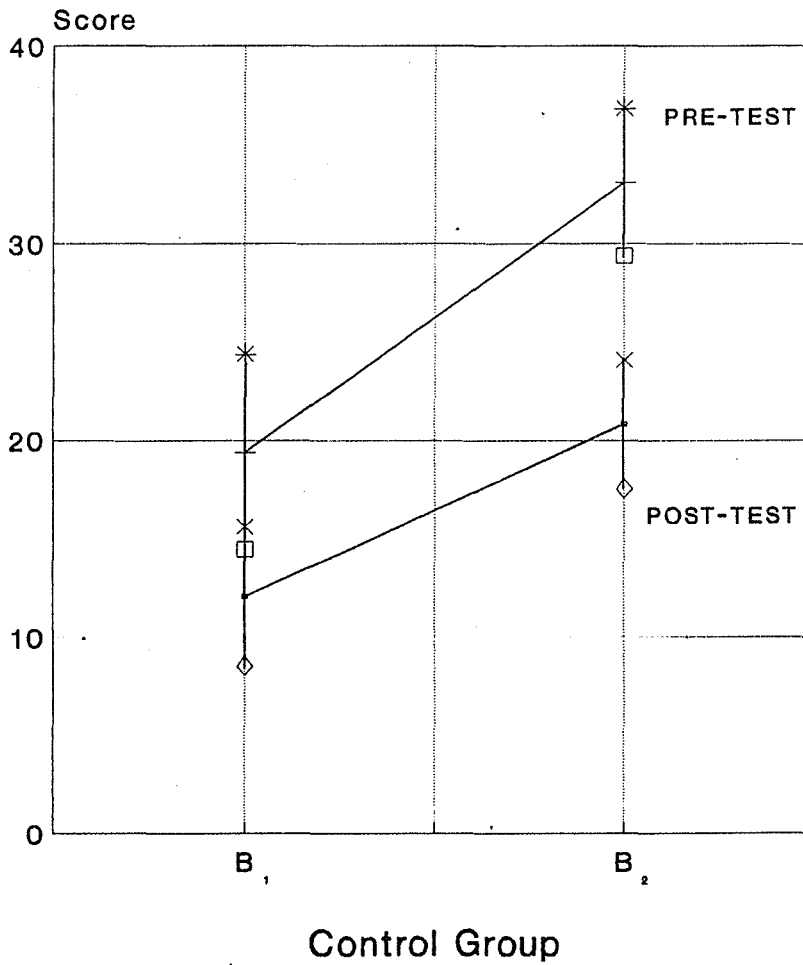


Fig.2: Mean ± limit of error (at P<5) for the control groups at pre- and post-test levels.



Results obtained conform with reports found in the literature. In a similar study by Woroniecki et al. (1982) score on information presented by the pharmacist with written reinforcement increased by 30.6% from pre-test to post-test. Scores of the control group patients showed no improvement between pre- and post-test.

Fig. 1 is a statistical evaluation of the scores obtained by patients within the various subgroups. Fig. 2 gives the results of the comparisons performed at both pre- and post-test levels.

The main conclusion from these comparisons is that counselling of patients by the pharmacist always afforded best results in terms of information held by the patient 15 days after discharge from hospital. Furthermore, patients offered additional written instructions fared superiorly from patients counselled only verbally. Thus patient counselling by pharmacists giving verbal advice and reinforcing written instructions seems to be recommendable. This same conclusion was drawn by Regner et al. (1987) and Myers and Calvert (1984).

Several factors have been associated with noncompliance. Age, sex, family situation, and education are patient variables. Disease variables include the number of diseases and the severity and chronicity of the diseases. There are also setting variables and practitioner-patient variables, as well as treatment variables, such as number of medications, side-effects, formulation, scheduling of treatment regimen, duration of therapy, and class of medication (Murray et al., 1986; Sneddon and Farrall, 1989; Eaton and Holloway, 1980).

Age (over 60 years), number of prescription drugs upon discharge (more than one), number of diseases (more than one), educational level (nil or primary), and sex (females) were all found to be factors predisposing to noncompliance.

From results obtained and experience gained during the practical work several recommendations can be drawn enabling the hospital pharmacy to start operating a system of pre-discharge patient counselling by pharmacists.

The basic activity which should underlie any clinical pharmacy function is pharmacist attendance of Consultant ward rounds (Cutajar, 1991). Each hospital pharmacist should be able to do pre-discharge counselling: wards could be distributed amongst pairs of pharmacists who

would be responsible for counselling patients discharged from these wards. They would organize this activity together with other responsibilities towards the pharmacy.

As a start-up, only a selection of patients would be counselled. Criteria for selection of patients established by the present study could be adopted. In the future this selection could be widened. New criteria can be established by consultation with medical staff. Patients selected for counselling should receive both verbal advice as well as reinforcing written instructions.
Nonetheless, any patient discharged from hospital should receive a standard label as the one used in the study. Tablets/capsules should no longer be dispensed in paper-bags but in small plastic containers.

The design of dosing schedules centralized around the life-style of the patient, shorter duration of therapy, the institution of simple regimens, and changes in the under-graduate education of pharmacists are measures complementing a system of pre-discharge counselling.

Conclusion

Pre-discharge counselling of patients by pharmacists is the essential link between the treatment received by the patient in hospital and long-term compliance with any instituted therapy or recommended life-style changes.

This project demonstrated the effectiveness of pharmacists in such an activity and suggested ways how it can be implemented in practice.

References

ASHP Guidelines on pharmacist-conducted patient counselling. Amer. J. Hosp. Pharm. 1984; 41: 331d

Bailie G.R., Bennett S. Development of patient-specific drug information leaflets. Pharm. J. 1987; 238: 803 - 804

Cutajar S. Towards a clinical Pharmacy service in Hospital. Unpublished B.Pharm (Hons.) project, 1990

Eaton M.L., Holloway R.L. Patient comprehension of written drug information. Amer. J. Hosp. Pharm. 1980; 37: 240 - 243

Kitching J.B., Jones I.F. Communicating with patients. Pharm. J. 1990; 244: 82

McMahon T., Clark C.M., Baille G.R. Who provides patients with drug information? Brit. Med. J. 1987; 294: 355

Murray M.D., Darnell J., Weinberger M., Marts B.I. Factors contributing to medication non-compliance in elderly public housing tenants. Drug Intell. Clin. Pharm. 1986; 20: 140 - 152

Myers E.D., Calvert E.J. Information, compliance and side-effects: a study of patients on antidepressant medication. Brit. J. Clin. Pharmacol. 1984; 17: 21 - 25

Paulson P.T., Bauch T., Lamont-Paulson M., Zilz D.A. Medication data sheets - an aid to patient education. Drug Intell. Clin. Pharm. 1976; 10: 448 - 453

Puckett F.J., White S.J., Mossberg H.E., Matchett J.A. Pharmacist/patient counselling practices. Contemp. Pharm. Pract. 1978; 1: 67 - 71

Raynor D.K., Barber N.D. Understanding medicine labels: the effect of plain English. Pharm. J. 1989; 242: R13 - R17

Regner M.J., Hermann F., Douglas R.L. Effectiveness of a printed leaflet for enabling patients to use digoxin side-effect information. Drug Intell. Clin. Pharm. 1987; 21: 200 - 204

Robinson J.D., McKenzie M.W. Pharmacists' views on mandatory patient counselling. Drug Intell. Clin. Pharm. 1984; 18: 913 - 917

Quintrell N. Communication skills: a manual for Pharmacists. Pharmaceutical Society of Australia (1982)

Sneddon P.L., Farrall D.L. Medication compliance in elderly patients. Pharm J. 1989; 243: 19 - 20

Walker R., Kay E. Responding to patients. UK Clinical Pharmacy Association Practice Guide (1986)

Woroniecki C.L., McKercher P.L., Flager D.G. Effect of Pharmacist counselling on drug information recall. Amer. J. Hosp. Pharm. 1982; 39: 1907 - 1910